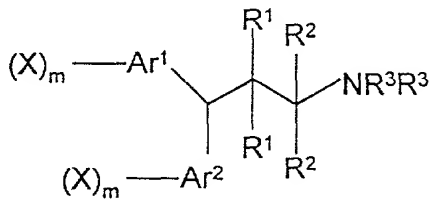
Claims

1. A method of treating a patent for depression comprising the step of administering to said patient an effective amount of a compound having a NMDA IC_{50} of about 50 nM to about 1 μM as measured in the NMDA assay and a serotonin reuptake IC_{50} of less than or equal to about 100 nm as measured in the serotonin reuptake inhibition assay.

2. The method of claim 1, wherein said compound has an NMDA receptor IC_{50} of 50 nM to 1 μM and a SSRI IC_{50} less than 100 nM.

3. A method of treating a patent for depression comprising the step of administering to said patient an effect amount of a compound having the chemical structure:



wherein each X is independently selected from the group consisting of -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, and -O-acyl;

Ar^1 and Ar^2 are each independently selected from the group consisting of phenyl, naphthyl, thiofuranyl, tetrahydronaphthyl, furanyl, tetrahydrofuranyl, pyridyl, quinolinyl, isoquinolinyl, tetrahydroquinolinyl, tetrahydroisoquinolinyl, cyclohexyl, cycloheptyl, and cyclopentyl;

each R^1 is independently selected from the group consisting of -H, alkyl, hydroxyalkyl, -OH, -O-alkyl, and -O-acyl;

each R^2 is independently selected from the group consisting of -H, alkyl, and hydroxyalkyl, or both R^2s together are imino;

each R^3 is independently selected from the group consisting of -H, alkyl, 2-hydroxyethyl, and alkylphenyl; and

each m is independently an integer from 0 to 5;

provided that if both R_3's are $-CH_3$, then both X_m's are not 3-F, 4-F, 3-CF_3, 4-Cl, and if both R_3's are $-CH_3$ and one X_m is 4-F then the other X_m is not 4-Cl; further provided that if one R_3 is -H and the other R_3 is $-CH_3$ then both X_m's are not 4-Cl, and if one R_3 is -H and the other R_3 is $-CH_3$ then at least one m is 1;

or a pharmaceutically acceptable salt thereof.

4. The method of claim 3 wherein for said compound each X is independently either -F, -Cl, $-OCF_3$ or $-CF_3$;

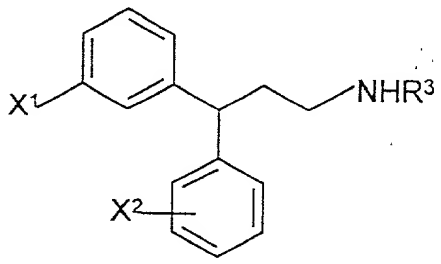
each R^1 is -H;

each R^2 is -H;

one R^3 is -H, and the other R^3 is either -H or -CH; and

each m is 1.

5. The method of claim 3 wherein said compound has the chemical structure:



wherein X^1 is either -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, or -O-acyl;

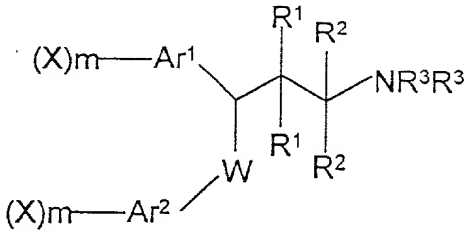
X^2 is either -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, or -O-acyl; and

R^3 is either -H or $-CH_3$;

or a pharmaceutically acceptable salt thereof.

6. The method of claim 5, wherein X^1 is -F, -Cl, $-OCF_3$ or $-CF_3$; and X^2 is either 2-OCH_3, 2-CH_3, 3-F, 3-CF_3, or 4-CF_3.

7. A method of treating a patent for depression comprising the step of administering to said patient an effect amount of a compound having the chemical structure:



wherein each X is independently selected from the group consisting of -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, and -O-acyl;

Ar^1 and Ar^2 are each independently selected from the group consisting of phenyl, naphthyl, thiofuranyl, tetrahydronaphthyl, furanyl, tetrahydrofuranyl, pyridyl, quinolinyl, isoquinolinyl, tetrahydroquinolinyl, tetrahydroisoquinolinyl cyclohexyl, cycloheptyl, and cyclopentyl;

each R^1 is independently selected from the group consisting of -H, alkyl, hydroxyalkyl, -OH, -O-alkyl, and -O-acyl;

each R^2 is independently selected from the group consisting of -H, alkyl, and hydroxyalkyl, or both R^2s together are imino;

each R^3 is independently selected from the group consisting of -H, alkyl, 2-hydroxyethyl, and alkylphenyl; and

m is 0 to 5;

or a pharmaceutically acceptable salt thereof.

8. The method of claim 7, wherein for said compound each X is independently either -F, -Cl, $-OCF_3$ or $-CF_3$;

Ar^1 and Ar^2 are each independently phenyl or naphthyl;

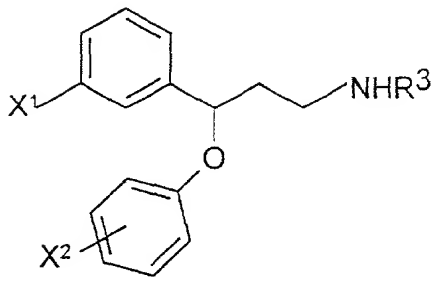
each R^1 is -H;

each R^2 is -H;

one R^3 is -H, and the other R^3 is either -H or -CH;

each m is 0 or 1.

9. The method of claim 7, wherein said compound has the chemical structure:



wherein X^1 is either -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, or -O-acyl;

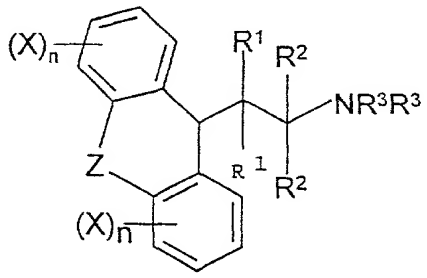
X^2 is either -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, or -O-acyl; and

R^3 is either -H or $-CH_3$;

or a pharmaceutically acceptable salt thereof.

10. The method of claim 9 wherein X^1 is either -F, -Cl, $-OCF_3$ or $-CF_3$; and X^2 is either 2-OCH_3, 2-CH_3, 3-F, 3-CF_3, or 4-CF_3.

11. A method of treating a patent for depression comprising the step of administering to said patient an effect amount of a compound having the chemical structure:



wherein each X is independently selected from the group consisting of -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, and -O-acyl;

each R^1 is independently selected from the group consisting of -H, alkyl, hydroxyalkyl, -OH, -O-alkyl, and -O-acyl;

each R^2 is independently selected from the group consisting of -H, alkyl, and hydroxyalkyl, or both R^2s together are imino;

each R^3 is independently selected from the group consisting of -H, alkyl, 2-hydroxyethyl, and alkylphenyl;

Z is either $-CH_2CH_2-$, $-CH_2CH(CH_3)-$, -CH=CH-, $-O-CH_2-$, $-S-CH_2-$, $-CH_2-$, -O-, or -S-; and

each n is independently 1 to 4; or a pharmaceutically acceptable salt thereof.

12. The compound of claim 11, wherein each X is independently either -F, -Cl, $-OCF_3$ or $-CF_3$;

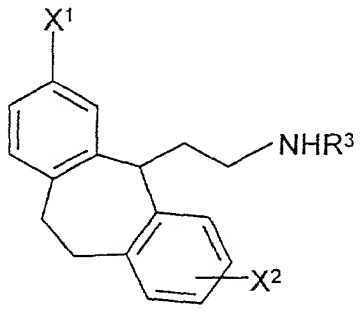
each R^1 is -H;

each R^2 is -H;

one R^3 is -H, and the other R^3 is either -H or -CH; and

each n is 1.

13. The method of claim 11, wherein said compound has the chemical structure:



wherein X^1 is either -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, or -O-acyl;

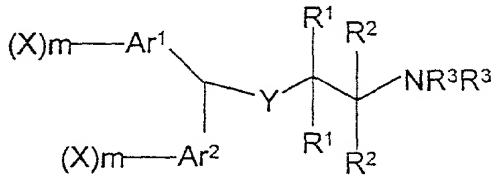
X^2 is either -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, or -O-acyl; and

R^3 is either -H or $-CH_3$;

or a pharmaceutically acceptable salt thereof.

14. The method of claim 13 wherein X^1 is -F, -Cl, $-OCF_3$ or $-CF_3$; and X^2 is either either -F, -Cl, $-OCH_3$, $-CH_3$, $-OCF_3$ or $-CF_3$.

15. A method of treating a patent for depression comprising the step of administering to said patient an effect amount of a compound having the chemical structure:



wherein each X is independently selected from the group consisting of -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, and -O-acyl; ; preferably, each X is independently either -F, -Cl, $-OCF_3$ or $-CF_3$;

Ar^1 and Ar^2 are each independently selected from the group consisting of phenyl, naphthyl, thiofuranyl, tetrahydronaphthyl, furanyl, tetrahydrofuranyl, pyridyl, quinolinyl, isoquinolinyl, tetrahydroquinolinyl, tetrahydroisoquinolinyl, cyclohexyl, cycloheptyl, and cyclopentyl; preferably Ar^1 and Ar^2 are independently naphthyl or phenyl; more preferably at least one of Ar^1 and Ar^2 is phenyl; and more preferably, both Ar^1 and Ar^2 are phenyl;

Y is either $-CH_2-$, -O-, or -S-;

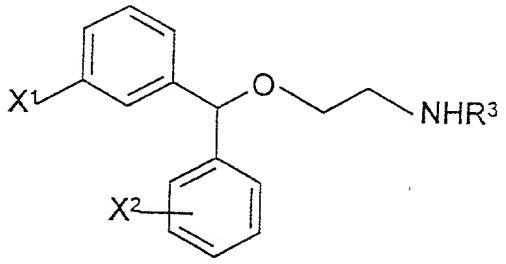
each R^1 is independently selected from the group consisting of -H, alkyl, hydroxyalkyl, -OH, -O-alkyl, and -O-acyl; preferably, each R^1 is -H;

each R^2 is independently selected from the group consisting of -H, alkyl, and hydroxyalkyl, or both R^2s together are imino; preferably each R^2 is -H;

each R^3 is independently selected from the group consisting of -H, alkyl, 2-hydroxyethyl, and alkylphenyl; preferably, each R^3 is independently either -H or $-CH_3$; more preferably one R^3 is -H, and the other R^3 is either -H or -CH; and

each m is independently an integer from 0 to 5; and preferably, each m is independently 0 or 1.

16. The method of claim 15, wherein said compound has the chemical structure; Structure VIII



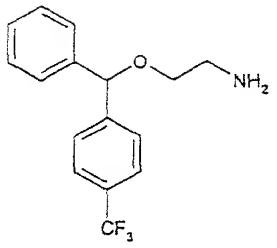
wherein X^1 is independently selected from the group consisting of -H, -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, or -O-acyl; preferably, X^1 is either -F, -Cl, $-OCF_3$ and $-CF_3$;

X^2 is either -Br, -Cl, -F, -I, $-CF_3$, alkyl, -OH, $-OCF_3$, -O-alkyl, or -O-acyl; preferably, X^2 is independently either -F, -Cl, $-OCH_3$, $-CH_3$, $-OCF_3$ or $-CF_3$; more preferably, X^2 is either 2-OCH_3, 2-CH_3, 3-F, 3-CF_3, or 4-CF_3; and

R^3 is either -H or CH_3;

or a pharmaceutically acceptable salt thereof.

17. A compound having the chemical structure;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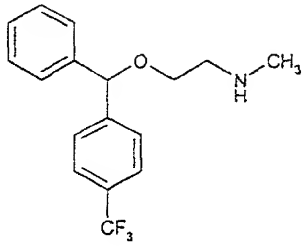
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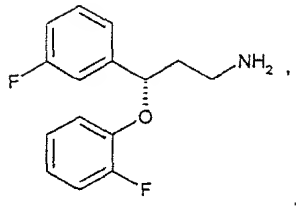
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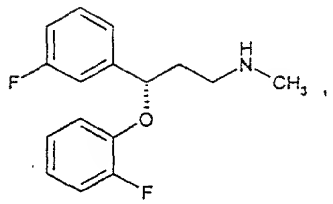
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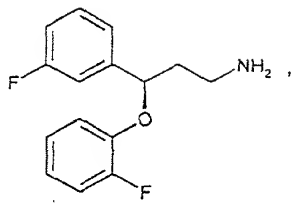
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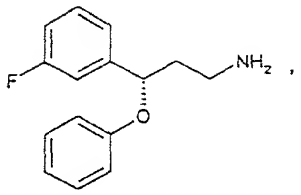
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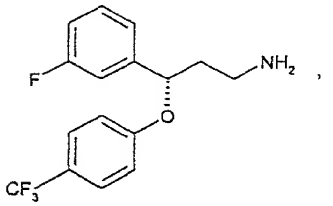
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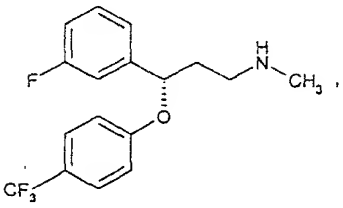
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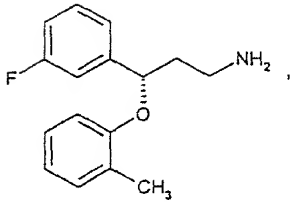
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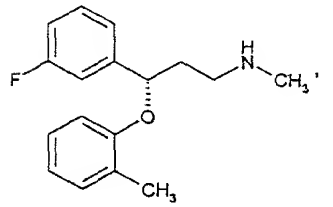
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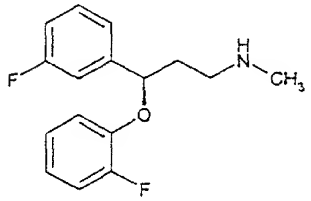
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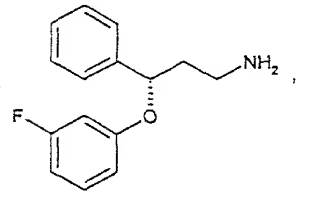
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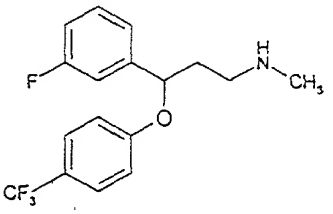
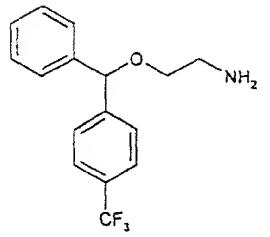


or a pharmaceutically acceptable salt thereof.

18. A method of treating a patent for depression comprising the step of administering to said patient an effect amount of a compound having the chemical structure: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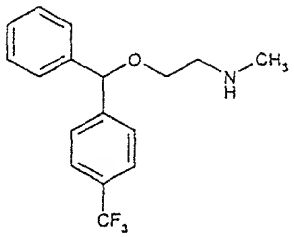
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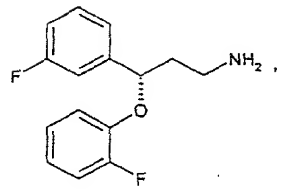
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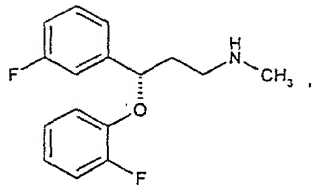
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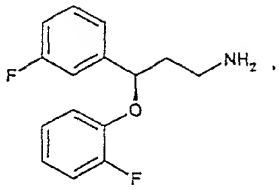
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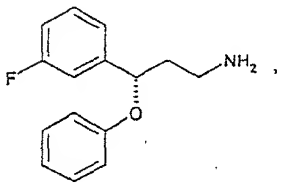
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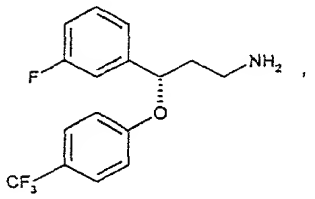
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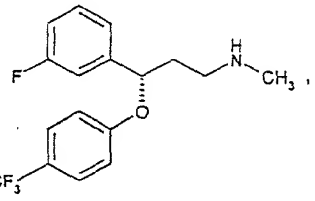
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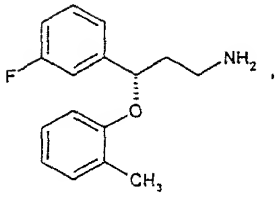
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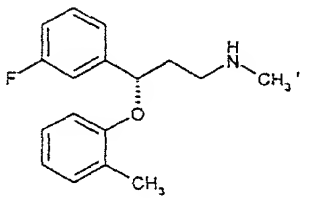
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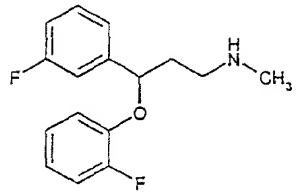
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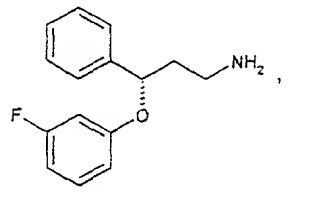
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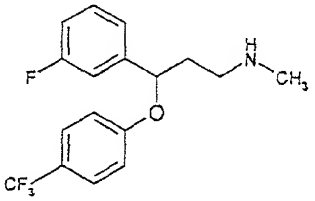

or a pharmaceutically acceptable salt thereof.